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EXAMINER

ZHEN, LI B

ART UNIT PAPER NUMBER

2126

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/663,665

Applicant(s)

SLAUGHTER ET AL.

Examiner

Li B. Zhen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3 and 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1 – 53 are pending in the application.

Specification

2. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1 – 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication NO. 2002/0073091 to Jain in view of U.S. Patent NO. 5774551 to Wu.**

7. As to claim 1, Jain teaches the invention substantially as claim including a method for the exchange of objects [data communication] in a distributed computing environment [data communication through one or more networks to other data devices; p. 4, paragraph (0071)], comprising:

user accessing a client device [displaying information to a computer user...another type of user input device is cursor control 716, such as a mouse, a trackball, or cursor direction keys for communicating direction information and command selections to processor 704, Fig. 7; p. 4, paragraph (0065)]; and

generating a computer programming language object [Java object] from a data representation language representation [XML document] of the object [converting an XML document 102 to a Java object 124, Fig. 1; p. 2, paragraph (0030)], wherein the object is an instance of a class in the computer programming language [a translation tool is provided for generating classes, in an object oriented language, based on the XML DTD; p. 2 – 3, paragraph (0033) – (0038)], and wherein the object is accessible for use during the accessing the client device [translation tool also generates the accessor methods to access the Java classes and individual node attributes; p. 2, paragraph (0029)].

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8. Although Jain teaches the invention substantially, Jain does not teach deleting the computer programming language object in response to the terminating access.

However, Wu teaches providing secure access to a client device [multiple authentication services for any given system entry service; col. 3, lines 45 – 55], a user accessing a client device [Unified login is accomplished through a authentication token mapping process; col. 3, lines 55 – 67], and deleting the computer programming language object [token and credentials are removed] in response to the terminating access [unified logout] so that the deleted object is not accessible by subsequent users of the client device [unified logout process ensures that the user's authentication token and credentials are removed from any publicly accessible resource, and thus cannot be fraudulently obtained or used after the user has terminated a session; col. 19, line 57 – col. 20, line 8].

9. It would have been obvious to a person of ordinarily skilled in the art at the time of the invention to apply the teaching of deleting the computer programming language object in response to the terminating access as taught by Wu to the invention of Jain because this would ensure that the object cannot be fraudulently obtained or used after the user has terminated a session [col. 20, lines 32 – 42 of Wu] and deallocates the storage for the object after the user has logged out, making the storage available for reuse [col. 20, lines 42 – 46 of Wu].

10. As to claim 2, Jain as modified teaches receiving a message in the data representation language from a service device in the distributed computing environment

[Computer system 700 can send messages and receive data, including program code, through the network(s), network link 720 and communication interface 718; p. 5, paragraph (0072) of Jain] prior to the generating a computer programming language object [retrieve the DTD version (getDTDMajorVersion(), DTD identification (getDTDUUID() or retrieve information about the top-level Address node, which is especially helpful if the node in conversion is a root node; p. 3, paragraph (0038) of Jain], wherein the message includes the data representation language representation of the object [retrieve information about the overall message as defined by the XML DTD 104; p. 3, paragraph (0038) of Jain].

11. As to claim 3, Jain as modified teaches accessing a client device comprises the user coupling an identification device to the client device [authentication services 109 may include password or encrypted key based mechanisms such as... hardware/firmware based mechanisms, such as smart-card; col. 15, lines 54 – 65 of Wu], wherein the identification device provides identification information of the user to the client device [the encrypted authentication tokens may be stored in a smart card, or other non-public storage facility; col. 10, lines 37 – 65 of Wu], and wherein the termination the accessing comprises decoupling the identification device from the client device [system entry service 107 initiates a disconnect process, and handles the necessary physical disconnection and protocols for disconnecting from the system 100, Fig. 5; col. 19, line 57 – col. 20, line 9 of Wu].

12. As to claim 4, Jain as modified teaches the identification device is a smart card [the encrypted authentication tokens may be stored in a smart card, or other non-public storage facility; col. 10, lines 37 – 65 of Wu].

13. As to claim 5, Jain as modified teaches the accessing a client device comprises the user logging on to the client device [Unified login is accomplished through a authentication token mapping process; col. 3, lines 55 – 67 of Wu] by providing user identification to the client device [the encrypted authentication tokens may be stored in a smart card, or other non-public storage facility; col. 10, lines 37 – 65 of Wu], and wherein the terminating the accessing comprises the user logging off the client device [user logouts 501 of the system entry service 107, either explicitly by invoking a specific method of the system entry service 107, or implicitly by shutting off the workstation or terminal the user is working on; col. 19, line 57 – col. 20, line 9 of Wu].

14. As to claim 6, Jain as modified teaches generating a computer programming language object [Java object of Jain] from a data representation language representation [XML document of Jain] of the object [converting an XML document 102 to a Java object 124, Fig. 1; p. 2, paragraph (0030) of Jain] is performed by a virtual machine executing within the client device [Java files 112 are then compiled to bytecode, which are integrated (or "linked") into an executable Java program 120, p. 2, paragraph (0030) of Jain; Examiner notes that virtual machine is inherent to compiling Java files].

15. As to claim 7, Jain as modified teaches generating a plurality of computer programming language objects [Java object] from data representation language representations [XML document] of the objects [converting an XML document 102 to a Java object 124, Fig. 1; p. 2, paragraph (0030) of Jain]; and

deleting the plurality of computer programming language objects in response to the terminating access [unified logout process ensures that the user's authentication token and credentials are removed from any publicly accessible resource, and thus cannot be fraudulently obtained or used after the user has terminated a session; col. 19, line 57 – col. 20, line 8 of Wu].

16. As to claim 8, Jain as modified teaches the data representation language [XML] is extensible Markup Language (XML) [converting an XML document 102 to a Java object 124, Fig. 1; p. 2, paragraph (0030) of Jain].

17. As to claim 9, Jain as modified teaches the computer programming language [Java] is the Java programming language [converting an XML document 102 to a Java object 124, Fig. 1; p. 2, paragraph (0030) of Jain].

18. As to claim 10, Jain as modified teaches a method for the secure exchange of objects [data communication] in a distributed computing environment [data

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communication through one or more networks to other data devices; p. 4, paragraph (0071) of Jain], comprising:

a user accessing a client device [displaying information to a computer user...another type of user input device is cursor control 716, such as a mouse, a trackball, or cursor direction keys for communicating direction information and command selections to processor 704, Fig. 7; p. 4, paragraph (0065) of Jain];

the client device receiving a message in a data representation language from a service device in the distributed computing environment [Computer system 700 can send messages and receive data, including program code, through the network(s), network link 720 and communication interface 718; p. 5, paragraph (0072) of Jain], wherein the message includes a data representation language representation of an object [retrieve information about the overall message as defined by the XML DTD 104; p. 3, paragraph (0038) of Jain];

if the determining, determines the user has access rights to the computer programming language object [If the authentication process is successful by the selected authentication services 109, the system entry service 107 is granted access to the computer 101; col. 19, lines 15 – 45 of Wu], generating the object from the data representation language representation of the object [converting an XML document 102 to a Java object 124, Fig. 1; p. 2, paragraph (0030) of Jain], wherein the object is an instance of a class in the computer programming language [a translation tool is provided for generating classes, in an object oriented language, based on the XML DTD; p. 2 – 3, paragraph (0033) – (0038) of Jain], and wherein the object is accessible for use during

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the accessing the client device [translation tool also generates the accessor methods to access the Java classes and individual node attributes; p. 2, paragraph (0029) of Jain]; and

if the determining determines the user does not have access rights [authentication failed] to the computer programming language object, not generating the object [indicates to the system entry service 107 that authentication failed, and hence the user is not authorized to access the computer; col. 10, lines 15 – 36 of Wu].

19. As to claim 11, Jain as modified teaches the message further includes access information for the computer programming language object [Computer system 700 can send messages and receive data, including program code, through the network(s), network link 720 and communication interface 718; p. 5, paragraph (0072) of Jain], wherein the determining if the user has access rights to the computer programming language object uses the access information [authentication service 109 verifies 407 the user, now using the primary authentication token, and stores 413 this primary authentication token to the global token; col. 19, lines 1 – 15 of Wu].

20. As to claim 12, Jain as modified teaches deleting the computer programming language object [token and credentials are removed] in response to the user terminating access to the client device [unified logout], wherein the deleted object is not accessible for use by subsequent users of the client device [unified logout process ensures that the user's authentication token and credentials are removed from any publicly accessible

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resource, and thus cannot be fraudulently obtained or used after the user has terminated a session; col. 19, line 57 – col. 20, line 8 of Wu].

21. As to claims 13 – 15, they are rejected for the same reasons as claims 3 – 5 above.

22. As to claim 16, Jain as modified teaches the user terminating the accessing the client device [unified logout process; col. 19, line 57 – col. 20, line 8 of Wu] and storing the computer programming language object in response to the terminating access [XML_to_Java translation tool 108 is used to convert an XML DTD 104 to Java classes 110 and stores each of these classes 110 in a respective file 112; p. 2, paragraph (0030) of Jain].

23. As to claim 17, Jain as modified teaches the user accessing the client device subsequent to the storing the object [received code may be executed by processor 704 as it is received, and/or stored in storage device 710, or other non-volatile storage for later execution; col. 5, paragraph (0073) of Jain], and accessing the stored object during the accessing the client device [translation tool also generates the accessor methods to access the Java classes and individual node attributes; p. 2, paragraph (0029) of Jain].

24. As to claim 18, Jain as modified teaches storing access rights information of the user with the object [the encrypted authentication tokens may be stored in a smart card,

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or other non-public storage facility; col. 10, lines 37 – 65 of Wu], wherein the accessing the stored object comprises verifying the access rights of the user with the stored access rights information [authentication service 109 verifies 407 the user, now using the primary authentication token, and stores 413 this primary authentication token to the global token; col. 19, lines 1 – 15 of Wu].

25. As to claims 19 – 21, they are rejected for the same reasons as claims 6, 8 and 9 above.

26. As to claims 22 – 25, these are apparatus claims that correspond to method claims 1 – 4; note the rejections to claims 1 – 4 above, which also meet these apparatus claims.

27. As to claim 26, Jain as modified teaches the device is further configured to accept user input [another type of user input device is cursor control 716, such as a mouse, a trackball, or cursor direction keys for communicating direction information and command selections to processor 704, Fig. 7; p. 4, paragraph (0065) of Jain] to initiate the terminating the user access [unified logout process ensures that the user's authentication token and credentials are removed; col. 19, line 57 – col. 20, line 8 of Wu].

28. As to claim 27, this is rejected for the same reason as claim 7 above.

29. As to claim 28, Jain as modified teaches a processor [processor 704, Fig. 7; p. 4, paragraph (0064) of Jain], a memory [a main memory 706, Fig. 7; p. 4, paragraph (0064) of Jain], and a virtual machine executed by the processor from the memory, wherein the generating is performed by the virtual machine [Java files 112 are then compiled to bytecode, which are integrated (or "linked") into an executable Java program 120, p. 2, paragraph (0030) of Jain; Examiner notes that virtual machine is inherent to compiling Java files].

30. As to claim 29, Jain as modified teaches the accepting, the terminating, and the deleting are performed by the virtual machine [Java files 112 are then compiled to bytecode, which are integrated (or "linked") into an executable Java program 120, p. 2, paragraph (0030) of Jain; Examiner notes that virtual machine is inherent to compiling Java files], wherein the object is stored in the memory subsequent to the generating [XML_to_Java translation tool 108 is used to convert an XML DTD 104 to Java classes 110 and stores each of these classes 110 in a respective file 112; p. 2, paragraph (0030) of Jain], and wherein, in the deleting, the object is deleted from the memory [token and credentials are removed from any publicly accessible resource; col. 19, line 57 – col. 20, line 8 of Wu].

31. As to claims 30 and 31, they are rejected for the same reasons as claims 8 and 9 above.

32. As to claims 32 – 36, these are system claims that correspond to method claims 10 – 14; note the rejections to claims 10 – 14 above, which also meet these system claims.

33. As to claim 37, Jain as modified teaches a memory [a main memory 706, Fig. 7; p. 4, paragraph (0064) of Jain], accept user input to terminate the access of the client device [unified logout process; col. 19, line 57 – col. 20, line 8 of Wu], and store the computer programming language object to the memory in response to the terminating access [XML_to_Java translation tool 108 is used to convert an XML DTD 104 to Java classes 110 and stores each of these classes 110 in a respective file 112; p. 2, paragraph (0030) of Jain].

34. As to claims 38 – 40, they are rejected for the same reasons as claims 17, 18 and 28 above.

35. As to claims 41 and 42, they are rejected for the same reasons as claims 8 and 9 above.

36. As to claims 43 and 44, these are product claims that correspond to method claims 1 and 2; note the rejections to claims 1 and 2 above, which also meet this product claim.

37. As to claim 45, this is rejected for the same reason as claim 7 above.
38. As to claim 46, this is rejected for the same reasons as claims 8 and 9 above.
39. As to claims 47 – 50, these are product claims that correspond to method claims 10 – 13; note the rejections to claims 10 – 13 above, which also meet these product claims.
40. As to claims 51 and 52, these are rejected for the same reasons as claims 16 – 18 above.
41. As to claim 53, this is rejected for the same reasons as claims 8 and 9 above.

Conclusion

42. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent NO. 6,569,207 to Sundaresan teaches automatically generating class specifications from extensible Markup Language (XML) schemas and then automatically instantiating objects from those class specifications.

U.S. Patent NO. 6,282,649 to Lambert teaches controlling access to electronically provided services.


43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2126

lbz
March 4, 2004


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